

# NATIONALS IN A NUTSHELL

The National Parent Forum of Scotland Summary of Biology National 4

**BIOLOGY**  
SCIENCES

NATIONAL  
**4**

**3**  
UNITS

**CELL BIOLOGY**  
**MULTICELLULAR ORGANISMS**  
**LIFE ON EARTH**

**+**  
ADDED  
VALUE  
UNIT

**ADDED VALUE UNIT: BIOLOGY ASSIGNMENT**

## What skills will my child develop?

- knowledge and understanding of biology
- an understanding of biology's role in scientific issues
- an understanding of biology in society and the environment
- scientific inquiry skills to plan and carry out experiments
- scientific analytical thinking skills in a biology context
- the ability to use technology, equipment and materials, in scientific activities
- problem-solving skills in a biology context
- finding associations and investigating models in real-life contexts
- use and understand scientific literacy to communicate ideas and issues
- information-handling skills (selecting, presenting, processing information)
- the ability to review science-based claims in media reports
- an understanding of the importance of accuracy
- evaluating environmental and scientific issues
- risk assessment and decision-making

## WHAT WILL MY CHILD EXPERIENCE DURING THE COURSE?

- Active and independent learning through self and peer evaluations, reflecting on learning, setting targets, evaluating progress, making independent decisions, using feedback
- A blend of classroom approaches including experimental, hands-on, practical, investigative approaches, whole class discussions, interactive teaching
- Collaborative learning: working with others in group or partner activities; cross-curricular learning eg with other sciences, mathematics, social studies, technologies or religious, moral and philosophical studies; with organisations such as STEMNET
- Space for personalisation and choice: learners can choose what to observe or measure and their methodology; learners will choose the topic for their Added Value Unit (Assignment)
- Applying learning
- Embedding literacy and numeracy skills: researching, selecting, summarising and presenting information; evaluating; recording and displaying data; interpreting data; using technology.

## ASSESSMENT

- To gain National 4, learners must pass all Units
- Units are assessed as pass or fail by the school/centre (following SQA external quality assurance to meet national standards)
- Unit assessment (or 'evidence of learning') will ensure that learners can apply knowledge and understanding and scientific skills to an experiment or practical investigation. This may be evidenced in a portfolio of work
- The Assignment will require learners to research a topic of their choice, in consultation with their teacher. The investigation will be undertaken in up to 8 hours of class time and the findings will be written up in no more than 2 hours.

National 4 progresses onto National 5

For more detailed course information:

SQA: Biology National 4: [www.sqa.org.uk/sqa/47422.html](http://www.sqa.org.uk/sqa/47422.html)

Education Scotland: [www.educationscotland.gov.uk/nationalqualifications/index.asp](http://www.educationscotland.gov.uk/nationalqualifications/index.asp)

Curriculum for Excellence Key Terms and Features Factfile:

[www.educationscotland.gov.uk/Images/CfEFactfileOverview\\_tcm4-665983.pdf](http://www.educationscotland.gov.uk/Images/CfEFactfileOverview_tcm4-665983.pdf)



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